Fact Sheet: Pollution Prevention For Industrial Rags

Rags Are Handy

In almost any garage or shop you will find rags and shop towels being used with solvents, lubricants, and cleaners to wipe and clean parts. No doubt about it, rags are handy.

Rags Can Be Expensive

But for many companies, rags are becoming a problem. They often contain hazardous substances and must be managed and disposed of as an expensive hazardous waste.

Reduce Rags Disposed as Hazardous Waste

Eliminating and reducing toxic materials, waste and pollution helps the environment. It also saves money, creates a healthier work environment, increases your company's efficiency and makes it more competitive. Reducing the number of rags disposed of as hazardous waste is a good place to start.
Here are some suggestions:

• Management Commitment

Establish a management policy to support waste reduction and pollution prevention. Set and track goals for reduction of wastes and emissions. Recognize employee contributions through awards and incentives.

• Involve Employees; Vendors; Customers

Ask employees to minimize use of toxic substances which make the rags hazardous waste. Encourage employees to make suggestions on substitutes and other ways to minimize toxicities. Ask vendors for less toxic processes and materials. Involve customers by helping them understand the environmental impacts associated with the use of various materials. If possible, show customers that their choices can have an impact on the environment and provide them with affordable, environmentally-preferable choices.

• Reduce the Necessity for Cleaning

 Coordinate production thereby reducing the number of cleanups. Schedule similar jobs consecutively which may reduce setup time and cleanups.

• Substitute Non-Toxic Materials

 Examine your inventory and past purchases of cleaners, lubricants, and solvents. Determine what is essential or unnecessary for your process and institute purchasing controls. Review Material Safety Data Sheets (MSDS) for necessary materials in order to determine if less toxic substitutes are feasible. Avoid materials that are flammable, contain VOCs and have a low vapor pressure (less than 10 mm mercury). Ask the vendor, your trade association, and others about nonhazardous substitutes. The Pollution Prevention Unit can help with software or published data. After some trial and error, you may be successful in eliminating a dangerous material from your workplace.

•Implement Controls

 Make an "OK To Purchase" list of materials that are essential. Require special approval to purchase others. Limit inventory access. Track use of toxic materials at the operator level. Track waste generation and make departments accountable for waste streams they generate. Make waste minimization a factor in employee performance evaluations.

• Use Up Current Inventory

 Don't dispose of materials in stock. Use them up completely before disposing of them.

• Reduce Toxic Use

 Studies show that workers use less of a cleaner if they spray it on a rag and then apply it to the part instead of soaking the rag in the cleaner first. Automatic parts washers can reduce rag use. Covering solvents can reduce evaporation.

• Wring out Rags

 Use hand or mechanical wringing or a centrifuge to remove excess solvent from rags. Vendors can provide equipment for solvent recovery and recycling. Be sure to check fire codes, ventilation and electrical requirements. The recovered solvent should be stored in a closed, marked container.

• Lease or Launder Shop Rags

 Leased rags are typically sent to an industrial laundry for washing. Rags contaminated with solvent are not considered hazardous wastes if they are not saturated and are laundered and reused. They should be sent to an industrial laundry which has a water treatment system and oil separator to prevent hazardous materials from entering the sanitary sewers.

• Disposable Wipes

 Disposable wipes can reduce rag disposal and solvent use. Disposables are smaller and contain a prepared amount of solvent. Disposables that contain hazardous materials should be handled as a hazardous waste.

 Arizona Success Story

 • McDonnell Douglas Helicopter Systems, Mesa, AZ

In 1994 McDonnell Douglas generated 38 tons of used rags, which traditionally were shipped for incineration. To reduce the waste, the company changed to laundering oil-contaminated rags. They found industrial laundries with the technology to wash the rags and filter out the oils with no environmental impact. The plant gets cleaned rags, and the oil is recycled.

Secondly, prepackaged wipes are used. These solvent-wetted wipes, which are packaged in plastic containers, have replaced rags in some shops. Because they are about half the size of the rags, the wipes generate less waste.

Previously, workers would dip rags in buckets of solvent. Now they use less solvent so there are fewer air emissions and chances for spills. These practices are expected to reduce hazardous waste generation by 25%.

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For More Information:

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Recycling Hotline: (602) 253-2686

Small Business Assistance Centers

Maricopa County: (602) 506-5150
http://www.maricopa.gov/envsvc/sbeap.htm

Pima County: (520) 740-3342

Internet

Management of Solvents & Wipes in the printing Industry:
http://www.Inhs.uiuc.edu:70/pneac/sheets/solwipe.html